

CSM – 30/17
Forestry
Paper – I

Time : 3 hours

Full Marks : 300

The figures in the right-hand margin indicate marks.

*Candidates should attempt Q. No. 1 from Section – A and Q. No. 5 from Section – B which are compulsory and any **three** of the remaining questions selecting at least **one** from each Section.*

SECTION – A

1. Answer any **three** of the following : $20 \times 3 = 60$
 - (a) Moisture is an important factor influencing physiology, soil formation and growth of vegetation. Justify this statement.
 - (b) What do you understand about altitude ? How its variations affect the temperature, rainfall and vegetation ?

- (c) We can predict the regeneration and growth of tree in a forest from knowledge of their photosynthetic light saturation curve. Justify.
- (d) Name the group, sub-group, type and sub-type of the following abbreviations and also give the details of main forest species and their associated found in these types :
- (i) 2B/C3
 - (ii) 3B/C1(c)
 - (iii) 3C/DS1
 - (iv) 5/E6
 - (v) 8A/C3
2. (a) What are the physical characteristics of soil that a forester needs to understand and respect ? Discuss in details. 30
- (b) What are seed rain, seed bank and bud bank ? Why does forester need to know about them ? Explain with examples. 30
3. (a) Why should indigenous species be preferred in plantation ? Discuss their merits and demerits with example. 30

(b) What is community nursery ? How will you develop it ? Describe step by step in detail.

30

4. (a) Why variation in stand density, (such as induced by thinning), cause very large variation in diameter growth but remarkably little in height growth ? Discuss in detail. 30

(b) What are tidal swamp forests ? List the different forest types found in them along with their species composition. 30

SECTION -- B

5. Answer any **three** of the following : 20×3 = 60

(a) Sustained yield from Indian forests is very low as compared to western countries. Explain.

(b) The greatest role forests play today is climate mitigation. Explain.

(c) Protection of indigenous species from invasive weeds is becoming problematic. Explain.

(d) Forests help in controlling soil erosion. Explain.

6. Differentiate with suitable examples :
- (a) Coppice with standard system vs Coppice with reserve system 20
 - (b) Shelterbelt vs Windbreak 20
 - (c) Production forestry vs Conservation forestry 20
7. Write notes on the following :
- (a) Site quality and productivity 20
 - (b) Steps involved in reducing rotation age 20
 - (c) Methods/steps involved in protection against insect pests 20
8. (a) Plantation Forestry in India is based on exotics. Justify your views with suitable examples. 30
- (b) Forests are more important as centres of biodiversity conservation and recreation. 30

